## **Hardie**Plank®

Thickness 5/16 in Length 12 ft planks

#### **SELECT CEDARMILL® & SMOOTH**

Width	5.25 in	6.25 in	7.25 in	8.25 in
Exposure	4 in	5 in	6 in	7 in
Prime Pcs/Pallet	360	308	252	230
ColorPlus Pcs/Pallet	324	280	252	210
Pcs/Sq	25.0	20.0	16.7	14.3

#### **SELECT CEDARMILL®**



Width	5.25 in	6.25 in	7.25 in	8.25 in	
STATEMENT COLLECTION™	<b>√</b>	$\checkmark$			
DREAM COLLECTION™	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
PRIME	$\checkmark$	<b>√</b>	<b>√</b>	<b>√</b>	

# **SMOOTH**

Width	5.25 in	6.25 in	7.25 in	8.25 in	
STATEMENT COLLECTION™	<b>√</b>	<b>√</b>			
DREAM COLLECTION™	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
PRIME	$\checkmark$	$\checkmark$	<b>√</b>	<b>√</b>	

#### **BEADED CEDARMILL®**



#### **BEADED CEDARMILL® & BEADED SMOOTH**

Width 8.25 in Exposure 7 in Prime 240 Pcs/Pallet ColorPlus 210 Pcs/Pallet Pcs/Sq 14.3



#### **BEADED SMOOTH**



**STATEMENT**  $\textbf{COLLECTION}^{\scriptscriptstyle{\mathsf{TM}}}$ **DREAM**  $\textbf{COLLECTION}^{\text{\tiny{TM}}}$ **PRIME** 

# **Hardie**Panel®

Thickness 5/16 in

# FIBER CEMENT PANEL SIDING

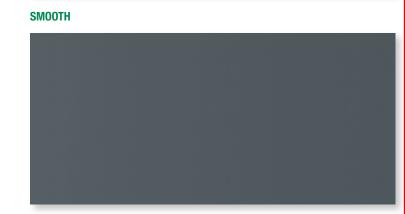
#### SELECT CEDARMILL®, SMOOTH, STUCCO & SIERRA 8

Size	4 ft x 8 ft	4 ft x 10 f
Prime Pcs/Pallet	50	50
ColorPlus Pcs/Pallet	50	50
Pcs/Sq	3.2	2.5

#### SELECT CEDARMILL®



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION™		$\checkmark$
DREAM COLLECTION™	$\checkmark$	$\checkmark$
PRIME	$\checkmark$	$\checkmark$





#### **STUCCO**



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION™		
DREAM COLLECTION™	<b>√</b>	<b>√</b>
PRIME	$\checkmark$	<b>√</b>

#### SIERRA 8



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION™ DREAM		
COLLECTION™		
PRIME	<b>✓</b>	$\checkmark$

#### **Hardie**Trim®

Length 12 ft boards

#### **NT3® BOARDS SMOOTH**



FIBER CEMENT SIDING TRIM

#### 4/4 SM00TH

Thickness .75 in

Width 3.5 in

ColorPlus Pcs/Pallet 312

5.5 in 208 156

7.25 in

9.25 in 104

11.25 in 104

STATEMENT **COLLECTION™** 

**DREAM** 

**COLLECTION™** 

**PRIME** 

#### 5/4 SM00TH

Thickness 1 in

Width 3.5 in

ColorPlus Pcs/Pallet 240

4.5 in 200

5.5 in 160

7.25 in 120

9.25 in 80

11.25 in 80

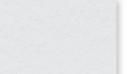
**STATEMENT**  $\textbf{COLLECTION}^{\text{\tiny{TM}}}$ 

**DREAM**  $\textbf{COLLECTION}^{\text{\tiny{TM}}}$ 

**PRIME** 

#### **BATTEN BOARDS**

#### **SMOOTH**





**RUSTIC GRAIN®** 

#### **SMOOTH & RUSTIC GRAIN®**

Thickness .75 in Width 2.5 in Prime 190 **Pcs/Pallet** 

ColorPlus 437 Pcs/Pallet

**STATEMENT**  $\textbf{COLLECTION}^{\scriptscriptstyle{\text{TM}}}$ 

**DREAM** COLLECTION™

PRIME



19

## **Hardie**Soffit®

Thickness 1/4 in

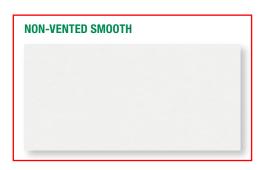
#### **VENTED SMOOTH**



#### **VENTED SELECT CEDARMILL®**



### ROOF OVERHANG FIBER CEMENT SOFFIT



#### **NON-VENTED SELECT CEDARMILL®**



#### **BEADED PORCH PANEL**



#### **VENTED SMOOTH & SELECT CEDARMILL®**

Length	12 ft	12 ft	8 ft
Width	12 in	16 in	24 in
Prime Pcs/Pallet	200	150	100
ColorPlus Pcs/Pallet	216	156	108

Size	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in
		. =	0

Size	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in

SIZE	12 IL X 12 III	12 IL X 10 III	0 ILX 24 III
STATEMENT COLLECTION™			
DREAM COLLECTION™	<b>✓</b>	<b>√</b>	✓
PRIME			

#### **NON-VENTED SMOOTH & SELECT CEDARMILL®**

Length	12 ft	12 ft	8 ft	8 ft
Width	12 in	16 in	24 in	48 in
Prime Pcs/Pallet	200	150	100	50
ColorPlus Pos/Pallet	216	156	108	_

Sizo	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in	2 ft v /12 in

STATEMENT COLLECTION™					
DREAM COLLECTION™	<b>√</b>	$\checkmark$	$\checkmark$		
PRIME	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	

Size	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in	8 ft x 48 in
STATEMENT COLLECTION™ DREAM		<b>√</b>	<b>√</b>	
COLLECTION™			<u> </u>	

#### **BEADED PORCH PANEL**

**PRIME** 

STATEMENT COLLECTION™		Thickness Length
DREAM ✓ COLLECTION™		Width
PRIME	50	ColorPlus Pcs/Pallet

#### RAINSCREEN | EXPOSED FASTENER PANELS



Exposed fastener panels provide ultimate flexibility with panels that can be used as exterior or interior walls, roofs or soffits. Exposed fastener panels can be installed in any weather to enable faster scheduling.

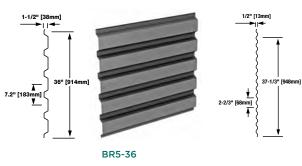
#### **FEATURES & BENEFITS**

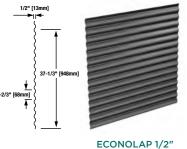
- Extremely versatile panels can be used as exterior or interior walls, roofs and soffits
- Ribs can be run either horizontally or vertically
- May be installed to meet many levels of thermal protection
- Excellent negative wind load properties
- Excellent option for both new construction and retrofit projects
- All-weather installation capability minimizes delays; permits fast-track scheduling
- Panels are available in embossed or smooth finishes

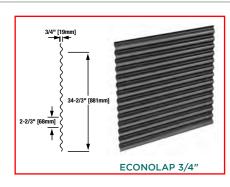
#### COMPONENT DESCRIPTION

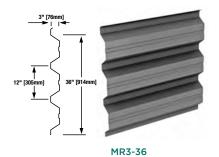
#### SUBSTRATES • Standard 24\*-18 gauge G-90 galvanized steel · Optional aluminum or stainless steel **SURFACE** • Smooth or embossed surface texture FINISH PANEL · Horizontal or vertical wall installation **ORIENTATION** • Wall and roof installation PANEL • Lengths up to 40' [12.2m] for steel panels **LENGTHS** Consult CENTRIA for more information. **COATINGS &** Available in a wide range of coil-coated colors **COLORS** and finishes. See charts on Pages 46-51.

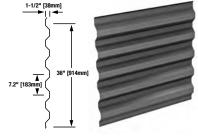
#### **EXPOSED FASTENER PANELS**



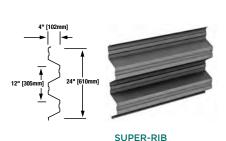


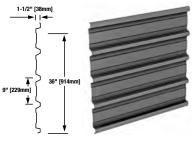






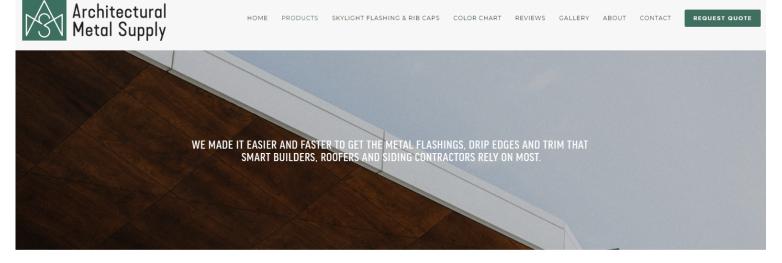
STYLE-RIB





TR4-36

<sup>\*24-</sup>gauge only available in certain profiles. Consult CENTRIA.



# Flashing, Soffit and Edge Metal

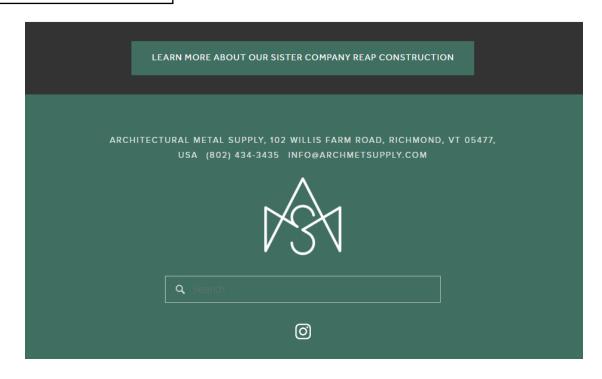
We made it easier and faster to get the metal flashings, drip edges and trim that smart builders, roofers and siding contractors rely on most. No more waiting for an order to arrive from out of state, no more labor-intensive hand-brake work.

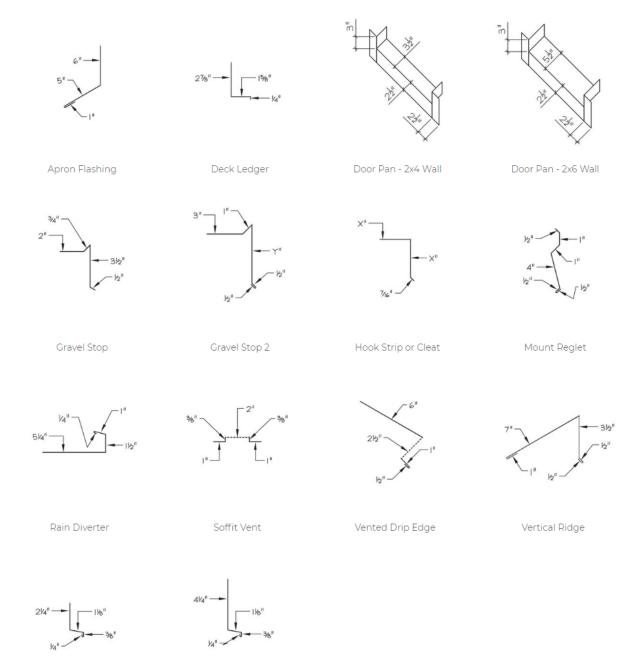
Architectural Metal Supply offers standard window and door flashing in thicker-gauge metal than you would find in a hardware or box store, and we offer it in an array of colors. We also offer custom flashing products that accommodate the exterior insulation and rainscreen often required with today's energy-code standards.



**METAL CLADDING** FOR ROOF PARAPET AND **OVERHANG** 

**REQUEST QUOTE** 





6" Window Flashing

4" Window Flashing





# ESSENTIAL DOUBLE HUNG

Previously known as Integrity All Ultrex Double Hung



#### Features of the Essential Double Hung Window

- Available in heights up to 6.5 feet or widths up to 4 feet
- Durable and low-maintenance material to the interior and exterior
- Low-profile, easy to operate locking mechanism
- Insert replacement option is available to fit seamlessly into existing window openings
- . Top and bottom sash tilt and remove easily for maintenance/cleaning

ENERGY DATA	U-FACTOR	SHGC	VT	ENERGY STAR	
Insulated Glass - Low E3 - Argon	0.29	0.22	0.51	NC, SC, S	h
Insulated Glass - Low E3 - Argon - GBG	0.29	0.20	0.46	NC, SC, S	0
Insulated Glass - Low E3 - Air	0.33	0.23	0.51	S	
Insulated Glass - Low E3 - Air - GBG	0.33	0.20	0.46	S	
Insulated Glass - Low E2 - Air - GBG	0.34	0.30	0.51		
Insulated Glass - Low E2 - Argon	0.30	0.33	0.57	NC	
Insulated Glass - Low E3 / Low ERS - Argon	0.25	0.22	0.50	N, NC, SC, S	
Insulated Glass - Low E3 / Low ERS - Argon - GBG	0.25	0.20	0.45	N, NC, SC, S	
Insulated Glass - Low E1 - Argon	0.31	0.55	0.63		
Insulated Glass - Low E1 - Argon - GBG	0.31	0.49	0.56		
Insulated Glass - Low E1 - Air	0.34	0.54	0.63		
Insulated Glass - Low E1 - Air - GBG	0.34	0.49	0.56		
Insulated Glass - Low E3 / Low ERS - Air	0.28	0.22	0.50	NC, SC, S	
Insulated Glass - Low E3 / Low ERS - Air - GBG	0.28	0.20	0.45	NC, SC, S	
Insulated Glass - Low E2 - Argon - GBG	0.30	0.30	0.51	NC	
Insulated Glass - None - Air	0.48	0.62	0.65		



#### **Unit Features**

Essential Double Hung: ESDH

For applicable certification and code information, refer to the Introduction and Product Performance chapter.

#### Frame and Sash:

- The frame and sash exteriors are made of Ultrex®, an advanced fiber reinforced material that is resistant to thermal conductance.
- Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony.
- Interior coating meets all the requirements in Stone White, Bronze, Ebony.
- Split finishes are not available on Dark Interior option. Only Bronze interior/Bronze exterior and Ebony interior/Ebony exterior combinations are available for dark interior options.

#### Frame:

Composite frame thickness is 1 3/8", (35). Frame width is 3 3/32", (79). Flat bottom sill with 11 degree bevel. Ultrex is .065"-070" (2) thick.

#### Sash:

- Composite sash thickness is 15/16" (24). Ultrex is .065" .070" (2) thick. Sash can be replaced by cannot be re-glazed.
- Cottage style unit: Sash divided 2/5 over 3/5.
- Oriel style unit: Sash divided 3/5 over 2/5.

#### Jamb Extension:

- 2" (51) is standard
- 4 9/16" (116) and 6 9/16" (167) maintenance free jamb extension available
- Available in Stone White, Bronze, or Ebony. Default color will match the unit interior selection. Stone White jamb extension is available for all unit interior color selections.

#### Hardware:

- Balance system is a coil spring block and tackle system
- Nylon cord and steel locking shoe
- High pressure zinc die cast check rail lock and keeper.
- · Lock employs a cam-lock mechanism
- Two locks on rough openings over 30" (762) wide
- Cam Lock, Keeper and Fastener Default Color: Stone White for Stone White Interior, Oil Rubbed Bronze for Bronze Interior, Matte Black for Ebony Interior.
- o Optional Stone White, Almond Frost, Brass, Satin Nickel, Matte Black, and Oil Rubbed Bronze hardware finishes available
- Tilt Latches, Top Sash Pull and Sash Lift will match the unit interior color (Stone White, Bronze or Ebony).
- Bottom Sash employs tilt latches to allow for easy tilting of sash
- Optional factory applied Window Opening Control Device is available in Black or White color finish.

(min size: 17 27/32" (453) x 24" (610) - max size: 36" (914) x 71 1/8" (1807))

- ABS sash travel limiter is available for field application in Beige color finish with Stone White or Matte Black screws.
- Non-operable lock is available for field application. Available colors: Stone White, Almond Frost, Brass, Oil Rubbed Bronze, Satin Nickel, Matte Black.

#### Installation:

- Factory applied folding nailing fin
- Optional through jamb installation method with brackets
- Factory supplied mulling kits are available for standard assemblies

#### Glazing:

- Dual-pane units are manufactured with an 11/16" (17) IG with Low E2, E3, E1, E3/ERS, or no coating including argon gas or air fill.
- Tempered glass and/or obscure glass, and California Fire glass (annealed exterior and tempered interior glazing configuration) are available as an option.
- The glazing seal is a silicone bedding on the exterior surface, and vinyl glazing seal on the interior surface.
- The perimeter spacer default color is mill finish (stainless). An optional black perimeter spacer color is available for all unit interior color selections.
- STC/OITC values are available for 3.1 mm thickness glass.
- Optional 3.1/4.7 STC/OITC Upgrade glass is available. See the Product Performance chapter for STC and OITC ratings.
- Decorative glass options include frost, glue chip, rain, reed, narrow reed and tinted (bronze, gray or green).
- · Decorative glass is not available with Low E3/ERS or STC/OITC.



#### **Unit Features Continued**

#### Weather Strip:

- Sill is foam filled vinyl bulb. Color: Beige for Stone White interior, Black for Bronze and Ebony interiors.
- Bottom sash is sealed to the jambs using foam filled vinyl bulb. Color: beige for Stone White interior, black for Bronze and Ebony interiors.
- Top sash is sealed to the jambs using a hollow vinyl bulb. Color: stone white rigid/bulb for Stone White interior, black rigid/bulb for Ebony interior and Bronze rigid/black bulb for Bronze interior.
- Check rails are sealed using rigid vinyl with flexible seal. Top sash check rail cover is beige for Stone White interior and black for Bronze and Ebony interiors. Bottom sash check rail cover will match the unit interior color (Stone White, Bronze or Ebony).

#### Screen:

- Roll formed aluminum frame with corner key construction
- Available in finish to match the exterior Ultrex frame color
- Charcoal color fiberglass (non-corrosive) screen cloth.
- Spring loaded pins for installation.
- Available in standard full screen or optional half screen

NOTE: Screen bar added when frame OM (height) is equal to or greater than 47 1/2" (1207)

#### Grilles-Between-The-Glass (GBG):

- 11/16" (17) contoured aluminum bar placed between two panes of glass
- Pattern: Standard rectangular pattern, optional 6 or 9 lite Prairie cut, or Cottage style cut on Double Hung
- Exterior Colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony
- Interior Colors: Stone White, Bronze or Ebony (matches unit interior color).
- Not available with tinted glass.

#### Accessories:

- Field Applied: J-Channel, a 1" (25) or 3" (76) frame expander, Flush Fin installation kit
- Factory Applied: Sheet rock return for 1/2" (13) or 5/8" (16) drywall, a 3/4" (19) receiver, a frame filler or a flush fin.
- Sheet rock return and 3/4" receiver color options: Stone White, Bronze or Ebony. Default color will match unit interior selection. Stone White sheet rock return and 3/4" receiver are available for all unit interior color selections.
- General Mull kits are available for field assembly

#### **Exterior Casing:**

- . Non-integral to the unit
- Fastened to the exterior wall with barb and kerf: 2" brick mould as a full surround or with sill nosing
- 3 1/2" flat casing available as full surround or with sill nosing
- Available with 1" ranch style and header overhang

NOTE: NFRC Values are now located on www.marvin.com



#### **ENERGY STAR® Program - United States**

#### www.energystar.gov

About ENERGY STAR®

ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

Residential Windows, Doors and Skylights

Thanks to advances in technology, today's ENERGY STAR® qualified windows, doors, and skylights offer greater savings than ever before. Just look for the ENERGY STAR® label.

Save energy and money.

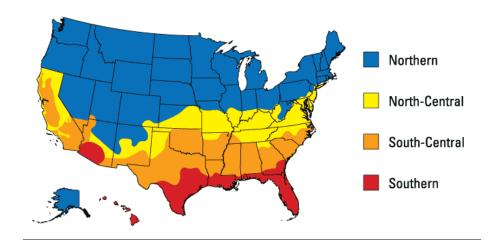
Replacing old windows with ENERGY STAR® qualified windows lowers household energy bills. Lower energy consumption also reduces greenhouse gas emissions from power plants and shrinks a house's carbon footprint.

Current Specification Effective Date: January 1, 2016

As of January 1, 2016, ENERGY STAR® qualified windows, doors, and skylights meet new performance levels, see below.

Windows and skylights must meet NFRC U-Factor and, where applicable, Solar Heat Gain Coefficient (SHGC) requirements based on climate zone. Doors must meet U-Factor and, where applicable, SHGC requirements based on glazing level (amount of glass).

At this time, most Marvin product lines qualify for the ENERGY STAR® program. For more specific information, please refer to the individual product sections in your Marvin catalog.



WINDOWS	3		
CLIMATE ZONE	U- FACTOR <sup>1</sup>	SHGC <sup>2</sup>	
Northern	≤0.27	Any	Prescriptive
	=0.28	≥0.32	Equivalent
	=0.29	≥0.37	Energy
	=0.30	≥0.42	Performance
North Central	≤ 0.30	≤ 0.40	
South Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25	

DOORS GLAZING LEVEL	U- FACTOR <sup>1</sup>	SHGC <sup>2</sup>		
Opaque	≤ 0.17	No Rating	1	
≤ ½-Lite	≤ 0.25	≤ 0.25		
. 1/ 15-	.0.20	Northern North-Central	≤ 0.40	
> ½-Lite	≤ 0.30	Southern South-Central ≤ 0		



#### **ENERGY STAR® Most Efficient - United States**

The ENERGY STAR® Most Efficient mark is an extension of the ENERGY STAR® brand and is designed to recognize and advance the most efficient products among those that qualify for ENERGY STAR®. This recognition is for specific categories and awarded for a specific year.

Marvin has long been a leader in providing our customers with energy efficient options. We are pleased to announce that Marvin meets the US ENERGY STAR® Most Efficient criteria with over 50 product types and 13,000+ glazing options.

#### MOST EFFICIENT CRITERIA

<b>Energy Star Zone</b>	U-factor	SHGC
Northern	<=0.20	>=0.20
North-Central	<=0.20	<=0.40
South-Central	<=0.20	<=0.25
Southern	<=0.20	<=0.25

As more product and glazing options are certified throughout the year, additional qualifying options will become available. The EPA has set up a page on its website where consumers can go to final all of the Marvin options that meet the Most efficient criteria.

To view the latest listing for casement windows

To view the latest listing for horizontal sliding windows

To view the latest listing for vertical sliding windows

To view the latest listing for fixed windows



#### **DOUBLE HUNG**

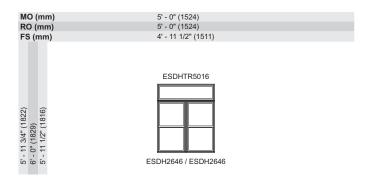
MO (mm) RO (mm) FS (mm) DLO (mm)	1' - 6" (457) 1' - 6" (457) 1' - 5 1/2" (445) 12 9/16" (319)	2' - 0" (610) 2' - 0" (610) 1' - 11 1/2" (597) 18 9/16" (471)	2' - 6" (762) 2' - 6" (762) 2' - 5 1/2" (749) 24 9/16" (624)	2' - 8" (813) 2' - 8" (813) 2' - 7 1/2" (800) 26 9/16" (675)	3' - 0" (914) 3' - 0" (914) 2' - 11 1/2" (902) 30 9/16" (776)	3' - 6" (1067) 3' - 6" (1067) 3' - 5 1/2" (1054) 36 9/16" (929)	4' - 0" (1219) 4' - 0" (1219) 3' - 11 1/2" (1207) 42 9/16" (1081)
1' - 11" 3/4" (603) 2' - 0" (610) 1' - 11 1/2" (597) 8 5/16" (211)	ESDH1620	ESDH2020	ESDH2620	ESDH2820	ESDH3020	ESDH3620	ESDH4020
2' - 5 3/4" (756) 2' - 6" (762) 2' - 5 1/2" (749) 11 5/16" (287)	ESDH1626	ESDH2026	ESDH2626	ESDH2826	ESDH3026	ESDH3626	ESDH4026
2" - 11 3/4" (908) 3" - 0" (914) 2" - 11 1/2" (902) 14 5/16" (363)	ESDH1630	ESDH2030	ESDH2630	ESDH2830	ESDH3030	ESDH3630	ESDH4030
3'-5 3/4" (1060) 3'-6" (1067) 3'-5 1/2" (1054) 17 5/16" (440)	ESDH1636	ESDH2036	ESDH2636	ESDH2836	ESDH3036	ESDH3636	ESDH4036
3' - 11 3/4" (1213) 4' - 0" (1219) 3' - 11 1/2" (1207) 20 5/16" (516)	ESDH1640	ESDH2040	ESDH2640	ESDH2840	ESDH3040	ESDH3640	ESDH4040
4' - 5 3/4" (1365) 4' - 6" (1372) 4' - 5 1/2" (1359) 23 5/16" (592)	ESDH1646	ESDH2046	ESDH2646	ESDH2846	ESDH3046	ESDH3646	ESDH4046
4' -11 3/4" (1518) 5' -0" (1524) 4' - 11 1/2" (1511) 26 5/16" (668)	ESDH1650	ESDH2050	ESDH2650	ESDH2850	ESDH3050 E	ESDH3650 E	ESDH4050 E
5' - 5 3/4" (1670) 5' - 6" (1676) 5' - 5 1/2" (1664) 29 5/16" (744)	ESDH1656	ESDH2056	ESDH2656	ESDH2856	ESDH3056 E	ESDH3656 E	ESDH4056 E
5' - 11 3/4" (1822) 6' - 0" (1829) 5' - 11 1/2" (1816) 32 5/16" (821)	ESDH1660	ESDH2060	ESDH2660 E	ESDH2860 E	ESDH3060 E	ESDH3660 E	ESDH4060 E
6' - 5 3/4" (1975) 6' - 6" (1981) 6' - 5 1/2" (1969) 35 5/16" (897)	ESDH1666	ESDH2066	ESDH2666 E	ESDH2866 E	ESDH3066 E	ESDH3660 E	ESDH4066 E

#### **DOUBLE HUNG - Transoms and Multiple Assemblies**

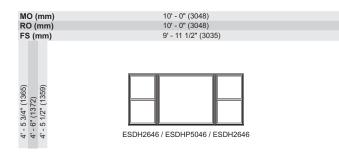
#### Transom Mulled Over Double Hung

# 

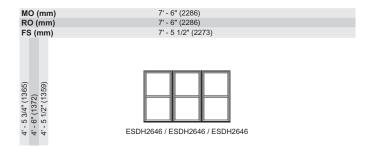
#### Transom Mulled Over Double Hung 2 Wide



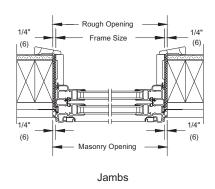
#### Double Hung Flankers with Center Picture\*

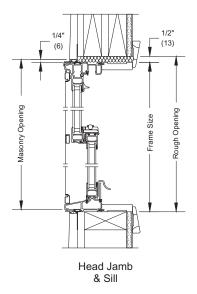


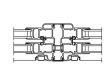
#### Double Hung Flankers with Center Operator



#### Construction Details









Vertical Mullion

Horizontal Mullion Transom/Operator

\* This product is only available field mulled.

Details and Elevations not to scale.

Available in equal, cottage, and reverse cottage sash configurations. Cottage and reverse cottage sash configurations are not available on 20, 60, and 66 call number heights.

Obscure Glass option available on all units.

Special sized units available within product size matrix. See your Marvin retailer.

Units may optionally include a window opening control device tested to ASTM F2090-10, which can be released from the inside without the use of a key, tool, special knowledge, or force greater than that required for normal unit operation.

See page 52 for specific PG Ratings.

For further details and drawings visit the 'Tools and Documents' section at Marvin.com.

#### **MULTIPLE ASSEMBLIES**

Multiple assemblies can be factory mulled.

MAXIMUM ROUGH OPENING not to exceed
114" x 78". Maximum up to 6 units wide by 1 unit high.

MAXIMUM ROUGH OPENING not to exceed
96" x 96". Maximum up to 5 units wide by 5 units high.

Field mull kits are available. Structural mullion
reinforcement is required for some assemblies.

Please consult your local Marvin representative for
more information.



# Feel the possibilities.

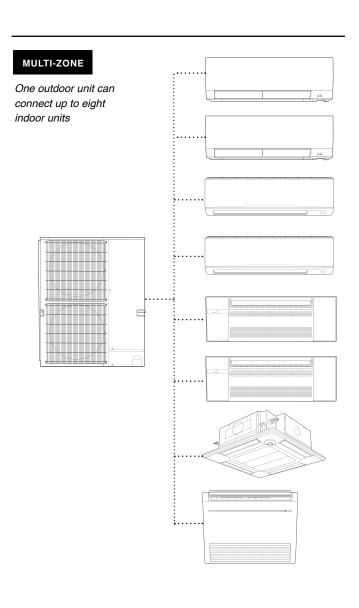
Cooling & Heating Solutions from Mitsubishi Electric

Comfort | Efficiency | Health





# SINGLE-ZONE One outdoor unit connects to one indoor unit



# Outdoor units and indoor units are available in single-zone and multi-zone versions.

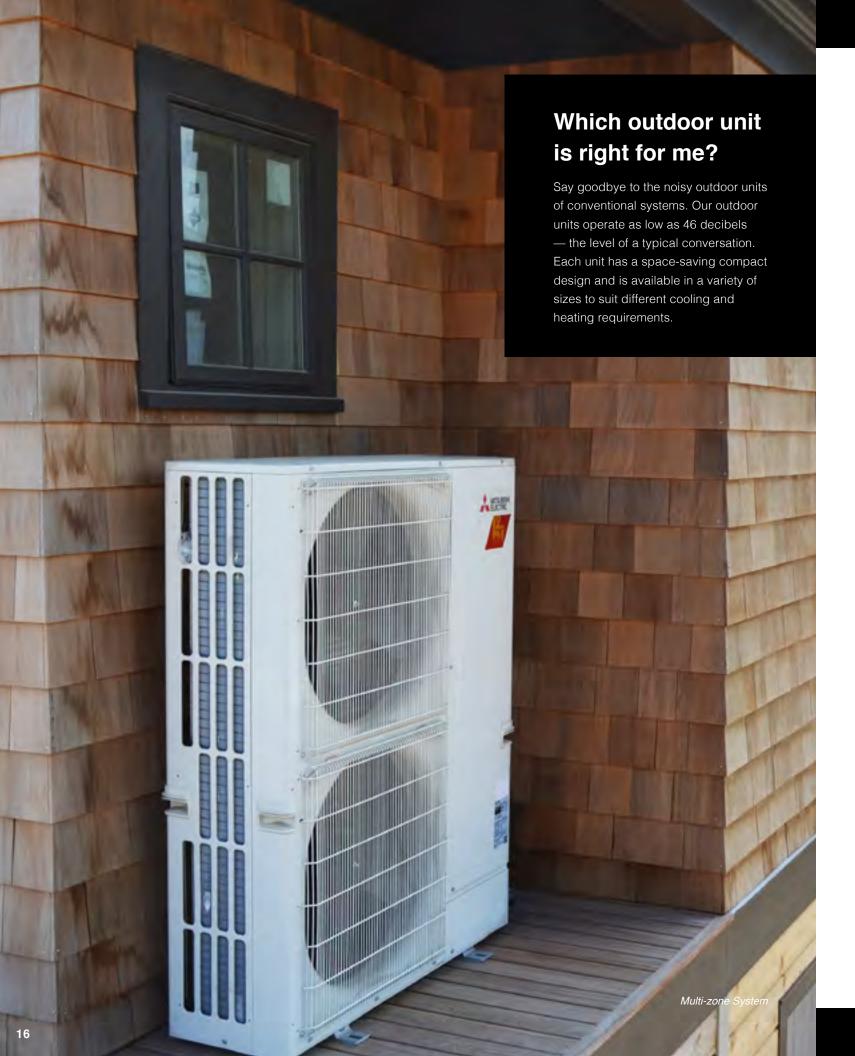
With single-zone equipment, one outdoor unit connects to one indoor unit (see pages 18-25 for indoor units available). This option is ideal if you only need cooling and heating in a single space.

With multi-zone equipment, one outdoor unit can connect up to eight indoor units. This option is perfect if you need cooling and heating in multiple spaces with different functions, such as a nursery versus a kitchen or an office versus a conference room.

Each zone is served by its own indoor unit. Indoor units come in a variety of forms including wall-mounted units, floor-mounted units, ceiling cassettes and air handlers.

Wall-mounted units tend to be the most popular, but a floor-mounted unit could be an attractive option for a sunroom that has windows, but no wall space. A high-performance air handler could replace an older system, such as a central system or boiler that previously cooled or heated an open space.

 ${\color{gray}\mathbf{9}}$ 



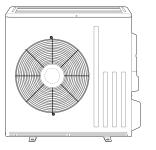
#### Single-Zone

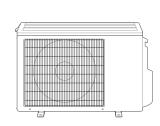
Available as a cooling only, heat pump or a hyperheating heat pump, each outdoor unit connects to a single indoor unit through refrigerant lines. These outdoor units have INVERTER-driven compressors that only use the precise amount of energy needed to keep the space comfortable.

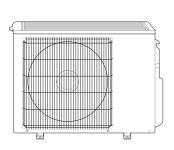
#### Multi-Zone

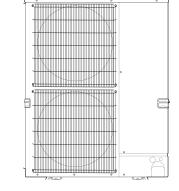
Available as a heat pump or an H2i® hyper-heating heat pump, each outdoor unit is capable of connecting up to eight indoor units. These outdoor units have INVERTER-driven compressors that only use the precise amount of energy needed to keep the space comfortable.











#### WPLED13N







LED 10W & 13 Wallpacks. Patent Pending thermal management system. 100,000 hour L70 lifespan. 5 Year Warranty.

Color: Bronze Weight: 3.3 lbs

Project: Pine and Flynn	Type: C
Prepared By: A. Murphy	<b>Date:</b> 06/28/16

Driver Info		LED Info	
Type:	Constant Current	Watts:	13W
120V:	0.13A	Color Temp:	4000K
208V:	A80.0	Color Accuracy:	83 CRI
240V:	0.07A	L70 Lifespan:	100000
277V:	0.06A	Lumens:	673
Input Watts:	15W	Efficacy:	45 LPW
Efficiency:	87%		

#### **Technical Specifications**

#### Listings

#### **UL Listing:**

Suitable for Wet Locations as a Downlight. Suitable for Damp Locations as an Uplight. Wall Mount only. Suitable for Mounting within 4ft. of ground.

#### Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

#### IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80, and have received the Department of Energy "Lighting Facts" label.

#### Optical

#### Lumen Maintenance:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

#### Fixture Efficacy:

44.6 Lumens per Watt

#### **Lumen Maintenance:**

The LED will deliver 70% of its initial lumens at 100,000 hours of operation.

#### **BUG Rating:**

B1 U0 G0

#### Construction

#### **Cold Weather Starting:**

The minimum starting temperature is -40°F/-40°C.

#### **Ambient Temperature:**

Suitable for use in 50°C (122°F) ambient temperatures.

#### Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

#### Green Technology:

RAB LEDs are Mercury and UV free.

#### For use on LEED Buildings:

IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

#### Gaskets:

High Temperature Silicone.

#### Electrical

#### Driver:

Multi-chip 13W high output long life LED Driver Constant Current, Class 2 100V - 277V, 50/60 Hz.

#### Surge Protection:

4KV

#### **LED Characteristics**

#### Color Temperature (Nominal CCT):

4000K

#### **Color Accuracy:**

86 CRI

#### **Color Consistency:**

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

#### Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

#### **Color Uniformity:**

RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015

#### Other

#### Patents:

The design of the LPACK is protected by U.S. Pat. D604,004 and patents pending in Canada, China and Taiwan.

#### California Title 24:

See WPLED13/PC for a 2013 California Title 24 compliant model.

#### Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

#### Equivalency:

The WPLED13 is Equivalent in delivered lumens to a 100W Metal Halide Wallpack.

#### **HID Replacement Range:**

The WPLED13 can be used to replace 70-150W Metal Halide Wallpacks based on delivered lumens.

#### **Country of Origin:**

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.



#### **Technical Specifications (continued)**

#### Other

#### **Buy American Act Compliant:**

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act

#### Recovery Act (ARRA) Compliant:

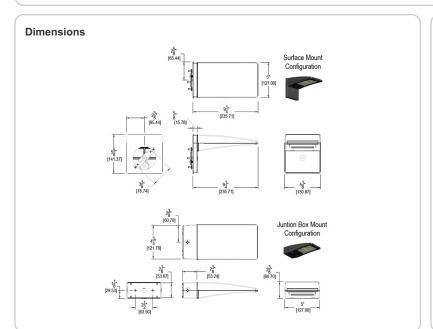
This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

#### **Trade Agreements Act Compliant:**

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

#### **GSA Schedule:**

Suitable in accordance with FAR Subpart 25.4.



#### **Features**

High performance LED light engine

Maintains 70% of initial lumens at 100,000 hours

Weatherproof high temperature silicone gaskets

Superior heat sinking with die cast aluminum housing and external fins

5-year warranty

ordering Matrix							
Family	Watts	Color Temp	Sensor	Surface Plate	Surface Place	Finish	Photocell
WPLED							
	10 = 10W 13 = 13W	= 5000K (Cool) Y = 3000K (Warm) N = 4000K (Neutral)	= No Sensor MS = Mini Sensor	= No Surface Plate	S = Surface Plate	= Bronze <b>W</b> = White	= No Photocell /PC = 120V Button /PCS = 120V Swivel /PC2 = 277V Button